## U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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### **MOLYBDENUM IN APRIL 1997**

Domestic production of molybdenum in concentrate increased 2% in April 1997 compared with that of the previous month and was 10% more than in April 1996, according to the U.S. Geological Survey. Producer molybdenum stocks in concentrate, oxide, and other product forms were 8,250 metric tons at the beginning of 1997 and 9,130 metric tons at the end of April 1997.

Included in this Mineral Industry Surveys (MIS) are U.S. production, shipments, and stocks of molybdenum concentrates and materials, plus U.S. consumption by end use of molybdenum in April 1997. Also included are trade data for March 1997. During April 1997, Platt's Metals Week U.S.

monthly average price for molybdenum concentrate was \$4.960 per kilogram (\$2.250 per pound). The average price for dealer molybdenum oxide was \$9.989 per kilogram (\$4.531 per pound) and that for dealer ferromolybdenum was \$12.125 per kilogram (\$5.500 per pound).

For the week ending June 20, 1997, Metals Week U.S. average price for molybdenum concentrate was \$4.960 per kilogram (\$2.250 per pound). The average price for dealer molybdenum oxide was \$10.141 per kilogram (\$4.600 per pound) and that for ferromolybdenum was \$11.904 per kilogram (\$5.400 per pound).

## $\begin{tabular}{ll} TABLE~1\\ U.S.~SALIENT~MOLYBDENUM~CONCENTRATE~STATISTICS~~1/\\ \end{tabular}$

(Metric tons, contained molybdenum)

			1997	
	1996 p/	March	April	Year to date
Production	56,000	5,350 r/	5,460	21,300
Shipments: 2/				
Domestic	16,100	1,120	1,180	4,760
Export	19,700	1,640	1,650	6,770

p/ Preliminary. r/ Revised.

 ${\it TABLE~2} \\ {\it U.S.~REPORTED~CONSUMPTION, BY~END~USES, AND~CONSUMER~STOCKS~OF~MOLYBDENUM~MATERIALS~1/~IN~APRIL~1997}$ 

(Kilograms, contained molybdenum)

	26.1.1.1	Ferro	Ammonium	Molyb-		
	Molybdic	molyb-	and sodium	denum		
End use	oxides	denum 2/	molybdate	scrap	Other	Total
Steel:						
Carbon	44,400	W	W			44,400
Stainless and heat-resisting	282,000	13,400	W			295,000
Full alloy	242,000	157,000	W			399,000
Electrical	W	W				W
High-strength low-alloy	32,700	8,300	19,600			60,600
Tool	80,300	3,630	W			83,900
Cast irons (gray, malleable, and ductile iron)	1,670	57,000	W			58,700
Superalloys	W	W	39,000	W		39,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)			W	W		W
Other alloys 3/		162	W			162
Mill products made from metal powder 4/			W			W
Cemented carbides and related products 5/						
Chemical and ceramic uses:						
Pigments					957	957
Catalysts	77,300		W		W	77,300
Other 6/	W		W		W	W
Miscellaneous uses:						
Lubricants			12,100			12,100
Other						
Unspecified uses:	61,000	39,900	181,000	47,500	75,900	405,000
Total	821,000	279,000	252,000	47,500	76,800	1,480,000
Stocks, April 30,1997	574,000	174,000	815,000	55,300	11,100	1,630,000

W Withheld to avoid disclosing company proprietary data; included with "Unspecified uses."

<sup>1/</sup> Data are rounded to three significant digits.

<sup>2/</sup> Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> Includes calcium molybdate.

<sup>3/</sup> Includes magnetic and nonferrous alloys.

<sup>4/</sup> Includes ingot, wire, rod, and sheet.

<sup>5/</sup> Includes construction, mining, oil and gas, and metal working machinery.

 $<sup>6\!\!/</sup>$  Includes ground coat, glass, silicone, electroplating, and drier in paint or related uses.

 ${\bf TABLE~3} \\ {\bf U.S.~REPORTED~PRODUCTION~AND~SHIPMENTS~OF~MOLYBDENUM~PRODUCTS~1/} \\$ 

#### (Metric tons, contained molybdenum)

			1997	
	1996 p/	March	April	Year to date
Gross production	46,300	4,070	4,570	18,200
Internal consumption 2/	23,900	1,890	2,080	8,290
Gross shipments	24,100	1,930	2,350	9,370

p/ Preliminary.

TABLE 4
U. S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES (Including roasted concentrate), BY COUNTRY 1/

(Kilograms, contained molybdenum)

		1997		
Country	1996	February	March	Year to date
Australia	60,900		19,600	28,700
Belgium	12,400,000	1,360,000	1,660,000	4,170,000
Brazil	20,400	339		339
Canada	268,000		56,000	90,000
Chile	6,990,000	633,000	325,000	1,690,000
China	1,290,000		125,000	265,000
France	5,620			
Germany	505,000	59,600	139,000	199,000
India	58,600			
Italy	384,000	58,700	58,000	137,000
Japan	5,140,000	549,000	751,000	1,860,000
Korea, Republic of	10,200			
Mexico	5,500,000	197,000	250,000	966,000
Netherlands	5,890,000	1,590,000	3,100,000	5,700,000
Spain	19,900	10,500		28,900
Sweden	473,000	19,900	119,000	219,000
United Kingdom	6,010,000	235,000	292,000	1,690,000
Other		508		9,540
Total	45,000,000	4,710,000	6,900,000	17,000,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

<sup>1/</sup> Data are rounded to three significant digits.

<sup>2/</sup> Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

 ${\bf TABLE~5}$  U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY 1/

(Kilograms, contained molybdenum)

Country	1996	February	March	Year to date	
Canada	252,000	36,100	26,400	96,500	
China				130	
Italy			3,170	3,170	
Japan	117,000		3,780	6,430	
Korea, Republic of	1,910		61	61	
Malaysia	37,200				
Mexico	117,000	15,800	22,900	40,700	
Singapore	53,900				
Spain	1,160				
Taiwan		905	2,650	3,550	
Venezuela	1,090				
Total	581,000	52,800	58,900	151,000	

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\it TABLE~6} \\ {\it U.S.~IMPORTS~FOR~CONSUMPTION~OF~MOLYBDENUM~PRODUCTS~1/} \\$ 

(Kilograms unless otherwise specified)

	1996			1997			
	January-December			January-March			
	Gross	Contained	Value (c.i.f.)	Gross	Contained	Value (c.i.f.)	
Material	weight	molybdenum	(thousands)	weight	molybdenum	(thousands)	
Ore and concentrates roasted	8,090,000	5,460,000	\$41,300,000	2,010,000	1,250,000	\$12,200,000	
Ore and concentrates other	35,600	21,100	173,000	459,000	238,000	1,720,000	
Molybdenum chemicals:							
Oxides and hydroxides	1,160,000		8,850,000	536,000		4,200,000	
Molybdates of ammonium	665,000	368,000	5,360,000	197,000	101,000	1,520,000	
Molybdates (all others)	82,500	36,400	506,000	57,000	33,900	350,000	
Molybdenum orange	1,840,000		5,710,000	422,000		1,380,000	
Mixtures of inorganic							
compounds							
Ferromolybdenum	7,870,000	4,960,000	55,100,000	1,480,000	938,000	9,990,000	
Molybdenum powders	125,000	110,000	3,470,000	15,500	12,900	558,000	
Molybdenum unwrought	91,100	84,400	2,380,000	97,200	93,500	1,140,000	
Molybdenum waste and scrap	693,000	640,000	9,720,000	132,000	128,000	1,980,000	
Molybdenum wrought							
Molybdenum wire	1,990		320,000	524		92,300	
Molybdenum other	3,870		1,060,000	1,360		206,000	
Total	20,700,000	11,700,000	134,000,000	5,410,000	2,800,000	35,400,000	

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.